

ordinary light. In recent retrobulbar neuritis, lines of this nature, as well as the texture of the nerve fibers come out more clearly, while the macular reflex is modified or disappears entirely: in this condition, all other objective signs are absent. With green light, acute or subacute retrobulbar neuritis, frequent prodrome of *sclerosia en plaques*, will not go unperceived: the wrong diagnosis of hysteria will thus be avoided.

Autoplastic Restoration of Eyebrows.—MORAX (*Ann. d'ocul.*, May, 1920, p. 286) makes the interesting remark that the arch of the eyebrows, unlike the common belief that it has no other role than an esthetic one, possesses a very useful function in that it prevents the entrance of the perspiration from the brow into the eye. In the case of a palpebro-frontal burn, the absence of such a dam came out very unpleasantly and, in fact, it was this which caused the patient to consult Morax. Autoplastic restoration may be accomplished by two different autoplastic methods: autoplasty by displacement of pediculated, hair bearing, cutaneous flaps taken from the maxillary region of the opposite side (in case of unilateral alopecia of the eyebrow) or from the temporo-frontal region. This method is extremely satisfactory in complete alopecia of both eyebrows; by its means, hairbearing grafts can be obtained to any desired extent and of perfect symmetry. It is the method of choice whenever possible, that is where the temporo-frontal region has not been denuded of hair by cicatricial alopecia. Autoplasty with non-pediculated hair-bearing flaps may also give good results, but they are uncertain, and when successful, the number of hair follicles which survive transplantation are always greatly reduced as compared with the follicles originally present in the grafted tissue. This procedure, the techic of which is undoubtedly capable of improvement, may be applied where the neighboring hair-bearing regions (temporofrontal, bearded cheek) have been deprived of their hair follicles or are not adapted to autoplasty with a pediculated flap.

HYGIENE AND PUBLIC HEALTH

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A Study of the Relation of Family Income and Other Economic Factors to Pellagra Incidence in Seven Cotton-mill Villages of South Carolina in 1916.—GOLDBERGER, WHEELER and SYDENSTRICKER (*Public Health Reports*, November 12, 1920, No. 46, xxxv, 2673) present the results of a careful study of the subject, in which the various factors are fully considered. In this discussion it is pointed

out that the receipt of an adequate income does not necessarily guarantee an adequate diet, as individual tastes may have a predominating influence. It is suggested that economic depression may lead to an increased pellagra incidence in 1921. The following quotation of part of the discussion and of the summary and conclusions is presented: The very great importance of food availability in relation to pellagra prevalence seems heretofore not to have been very clearly recognized. Under some circumstances, as we have shown, this factor may operate notably to affect the character of the diet and thus the incidence of the disease. Our data dealt with differences in availability between localities of relatively small area, but it is readily conceivable that analogous differences may exist between areas of great extent such as there is reason to believe actually is the case between the northern and southern parts of the United States. This difference is probably an important factor (together with the well-known difference in dietary habit, Sydenstricker, 1915) in the notable inequality in the incidence of the disease in these two sections of the country. The results of the present study clearly suggest fundamental lines along which efforts looking to the eradication of the disease should be directed, namely, (1) economic, by improvement of economic status (income), and (2) food availability, by improvement in availability of food supplies. Measures for improving the economic status of those people most subject to the disease, are in the main, outside of the sanitarian's sphere and but little subject to his influence. While much the same may be said to apply to the conditions of food availability, this field is more easily accessible, both directly and indirectly, to his activities and influence. Thus, for instance, by avoiding ill-considered regulations governing milk production he can, negatively at least, favor an adequate supply of this invaluable food. Furthermore, he can and should aid in improving the conditions of food availability by lending his powerful influence in support of and, by coöperating with, the agencies at work in this field, in their efforts to stimulate milk production (particularly through cow ownership) and to induce the farmer to adopt a suitable system of crop diversification. And in this connection it may perhaps be remarked that certain preliminary observations have created in our minds a rather strong suspicion that the single-crop system as practiced in at least some parts of our southern states, by reason of apparently unfavorable conditions of food supply and of other conditions of an economic character bound up therein, will be found indirectly responsible for much of the pellagra morbidity and mortality with which local agricultural labor is annually afflicted. Although considerable study will be required to determine definitely the factors responsible for the high incidence of the disease in the rural areas in question, it would, nevertheless, seem to be the part of wisdom to make an earnest effort to improve conditions in the ways suggested above. The authors draw the following summary and conclusions: (1) In the present paper are reported the results of the part of the pellagra study of cotton-mill villages, during 1916, dealing with the relation of conditions of an economic nature to the incidence of pellagra. It is the first reported study in which the degree of the long-recognized association between poverty and pellagra incidence is measured in a definite,

purely objective manner. (2) The study was made among the white mill operatives' households in seven typical cotton-mill villages of South Carolina. Pellagra incidence was determined by a systematic, biweekly, house-to-house canvass and search for cases, only active cases being considered. Information relating to household food supply, family income, etc., was secured by enumerators for a sample section of the period April 16 to June 15, assumed to be representative of the season during which the factors favoring the production of pellagra were assumed to be most effective. (3) Family income was made the basis of classification according to economic status, the Atwater scale for food requirements being used for computing the size of families in comparing their incomes. (4) In general, pellagra incidence was found to vary inversely according to family income. As the income fell, the incidence of the disease rose and showed an increasing tendency to affect members of the same family; as the income fell, incidence fell, being reduced almost to the point of practical disappearance in the highest of our income classes, although the income enjoyed by this class was comparatively quite low. (5) The inverse correlation between pellagra incidence and family income depended on the unfavorable effect of low income on the character of the diet; but family income was not the sole factor determining the character of the household diet. (6) Differences in incidence among households of the same income class are attributable to the operation of such factors as tend to determine the amount and proportion of family income available for the purchase of food, the intelligence and ability of the housewife in utilizing the available family income, and to the differences among households with respect to availability of food supplies from such sources as home-owned cows, poultry, gardens, etc. (7) Differences in incidence among villages whose constituent households are economically similar, are attributable to differences among them in availability of food supplies resulting from differences (a) in the character of the local markets, (b) in the produce from adjacent farm territory, and (c) in marketing conditions. (8) The most potent factors influencing pellagra incidence in the villages studied were (a) low family income, and (b) unfavorable conditions regarding the availability of food supplies, suggesting that under the conditions obtaining in some of these villages in the spring of 1916 many families were without sufficient income to enable them to procure an adequate diet, and that improvement in food availability (particularly of milk and fresh meat) is urgently needed in such localities.

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